



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

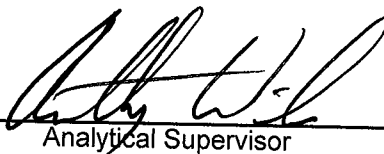
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002739
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00002739001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 08/13/2009 12:21
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 91 uMHO
Temperature: 26.65
Dissolved Oxygen: 7.55 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	210	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	45	µg/L	6.4	10	M Pattanayek	8/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	8/17/2009
Barium	28	µg/L	2.5	5	M Pattanayek	8/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009
Cobalt	0.27J	µg/L	0.04	1	M Pattanayek	8/17/2009
Copper	4.6	µg/L	0.38	1	M Pattanayek	8/17/2009
Lead	0.13J	µg/L	0.10	1	M Pattanayek	8/17/2009
Manganese	62	µg/L	0.42	1	M Pattanayek	8/17/2009
Nickel	U	µg/L	0.25	1	M Pattanayek	8/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009
Silver	0.030J	µg/L	0.03	0.25	M Pattanayek	8/17/2009
Thallium	0.28J	µg/L	0.03	1	M Pattanayek	8/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	8/17/2009

Lab-Sample Number: K00002739001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 08/13/2009 12:21
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 91 uMHO
Temperature: 26.65
Dissolved Oxygen: 7.55 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.03J	µg/L	0.029	0.2	A Bass	8/19/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002739002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 08/13/2009 10:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.69 pH Units
Chlorine, residual:
Conductivity: 106 uMHO
Temperature: 27.42
Dissolved Oxygen: 7.53 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	400	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	620	µg/L	6.4	10	M Pattanayek	8/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009
Arsenic	7.2	µg/L	0.93	5	M Pattanayek	8/17/2009
Barium	53	µg/L	2.5	5	M Pattanayek	8/17/2009
Beryllium	0.13J	µg/L	0.11	1	M Pattanayek	8/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009
Cobalt	0.56J	µg/L	0.04	1	M Pattanayek	8/17/2009
Copper	2.3	µg/L	0.38	1	M Pattanayek	8/17/2009
Lead	0.84J	µg/L	0.10	1	M Pattanayek	8/17/2009
Manganese	72	µg/L	0.42	1	M Pattanayek	8/17/2009
Nickel	0.92J	µg/L	0.25	1	M Pattanayek	8/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009
Thallium	0.18J	µg/L	0.03	1	M Pattanayek	8/17/2009
Vanadium	5.0	µg/L	3.4	5	M Pattanayek	8/17/2009
Zinc	4.0J	µg/L	1.9	5	M Pattanayek	8/17/2009

Lab-Sample Number: K00002739002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 08/13/2009 10:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.69 pH Units
Chlorine, residual:
Conductivity: 106 uMHO
Temperature: 27.42
Dissolved Oxygen: 7.53 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002739003
Project Name: TVA-Ash Spill
Sample Description: Approx. 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 08/13/2009 10:15
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.52 pH Units
Chlorine, residual:
Conductivity: 204 uMHO
Temperature: 24.17
Dissolved Oxygen: 7.27 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	270	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	µg/L	6.4	10	M Pattanayek	8/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009
Arsenic	2.5J	µg/L	0.93	5	M Pattanayek	8/17/2009
Barium	48	µg/L	2.5	5	M Pattanayek	8/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009
Cobalt	0.40J	µg/L	0.04	1	M Pattanayek	8/17/2009
Copper	2.9	µg/L	0.38	1	M Pattanayek	8/17/2009
Lead	0.48J	µg/L	0.10	1	M Pattanayek	8/17/2009
Manganese	62	µg/L	0.42	1	M Pattanayek	8/17/2009
Nickel	0.82J	µg/L	0.25	1	M Pattanayek	8/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009
Thallium	0.083J	µg/L	0.03	1	M Pattanayek	8/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009
Zinc	5.6	µg/L	1.9	5	M Pattanayek	8/17/2009

Lab-Sample Number: K00002739003
Project Name: TVA-Ash Spill
Sample Description: Approx. 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 08/13/2009 10:15
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations

pH: 7.52 pH Units
Chlorine, residual:
Conductivity: 204 uMHO
Temperature: 24.17
Dissolved Oxygen: 7.27 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.03J	µg/L	0.029	0.2	A Bass	8/19/2009	

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002739004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 08/13/2009 10:31
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.73 pH Units
Chlorine, residual:
Conductivity: 157 uMHO
Temperature: 25.70
Dissolved Oxygen: 8.12 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009	

TEST: ICP		METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	220	µg/L	2.9	10	A Bass	8/18/2009	

TEST: ICP-MS		METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Aluminum	220	µg/L	6.4	10	M Pattanayek	8/17/2009	
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009	
Arsenic	2.4J	µg/L	0.93	5	M Pattanayek	8/17/2009	
Barium	40	µg/L	2.5	5	M Pattanayek	8/17/2009	
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009	
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009	
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009	
Cobalt	0.29J	µg/L	0.04	1	M Pattanayek	8/17/2009	
Copper	2.7	µg/L	0.38	1	M Pattanayek	8/17/2009	
Lead	0.31J	µg/L	0.10	1	M Pattanayek	8/17/2009	
Manganese	59	µg/L	0.42	1	M Pattanayek	8/17/2009	
Nickel	U	µg/L	0.25	1	M Pattanayek	8/17/2009	
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009	
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009	
Thallium	0.063J	µg/L	0.03	1	M Pattanayek	8/17/2009	
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009	
Zinc	5.8	µg/L	1.9	5	M Pattanayek	8/17/2009	

Lab-Sample Number: K00002739004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 08/13/2009 10:31
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.73 pH Units
Chlorine, residual:
Conductivity: 157 uMHO
Temperature: 25.70
Dissolved Oxygen: 8.12 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.03J	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002739005
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 08/13/2009 10:42
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.63 pH Units
Chlorine, residual:
Conductivity: 256 uMHO
Temperature: 22.48
Dissolved Oxygen: 7.49 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	210	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	200	µg/L	6.4	10	M Pattanayek	8/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009
Arsenic	1.4J	µg/L	0.93	5	M Pattanayek	8/17/2009
Barium	42	µg/L	2.5	5	M Pattanayek	8/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009
Cobalt	0.30J	µg/L	0.04	1	M Pattanayek	8/17/2009
Copper	2.2	µg/L	0.38	1	M Pattanayek	8/17/2009
Lead	0.79J	µg/L	0.10	1	M Pattanayek	8/17/2009
Manganese	53	µg/L	0.42	1	M Pattanayek	8/17/2009
Nickel	U	µg/L	0.25	1	M Pattanayek	8/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009
Thallium	34	µg/L	0.03	1	M Pattanayek	8/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009
Zinc	5.0	µg/L	1.9	5	M Pattanayek	8/17/2009

Lab-Sample Number: K00002739005
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 08/13/2009 10:42
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.63 pH Units
Chlorine, residual:
Conductivity: 256 uMHO
Temperature: 22.48
Dissolved Oxygen: 7.49 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002739006
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 08/13/2009 10:57
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.77 pH Units
Chlorine, residual:
Conductivity: 249 uMHO
Temperature: 23.08
Dissolved Oxygen: 8.20 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	320	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	300	µg/L	6.4	10	A Wilson	8/17/2009
Antimony	U	µg/L	0.33	1	A Wilson	8/17/2009
Arsenic	2.6J	µg/L	0.93	5	A Wilson	8/17/2009
Barium	52	µg/L	2.5	5	A Wilson	8/17/2009
Beryllium	U	µg/L	0.11	1	A Wilson	8/17/2009
Cadmium	U	µg/L	0.41	1	A Wilson	8/17/2009
Chromium	U	µg/L	2.0	5	A Wilson	8/17/2009
Cobalt	0.43J	µg/L	0.04	1	A Wilson	8/17/2009
Copper	2.2	µg/L	0.38	1	A Wilson	8/17/2009
Lead	0.40J	µg/L	0.10	1	A Wilson	8/17/2009
Manganese	85	µg/L	0.42	1	A Wilson	8/17/2009
Nickel	0.35J	µg/L	0.25	1	A Wilson	8/17/2009
Selenium	U	µg/L	1.3	5	A Wilson	8/17/2009
Silver	U	µg/L	0.03	0.25	A Wilson	8/17/2009
Thallium	0.050J	µg/L	0.03	1	A Wilson	8/17/2009
Vanadium	U	µg/L	3.4	5	A Wilson	8/17/2009
Zinc	4.1J	µg/L	1.9	5	A Wilson	8/17/2009

Lab-Sample Number: K00002739006
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 08/13/2009 10:57
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.77 pH Units
Chlorine, residual:
Conductivity: 249 uMHO
Temperature: 23.08
Dissolved Oxygen: 8.20 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002739007
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 08/13/2009 11:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.78 pH Units
Chlorine, residual:
Conductivity: 265 uMHO
Temperature: 24.62
Dissolved Oxygen: 8.04 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009	

TEST: ICP		METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	190	µg/L	2.9	10	A Bass	8/18/2009	

TEST: ICP-MS		METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Aluminum	190	µg/L	6.4	10	M Pattanayek	8/17/2009	
Antimony	0.60J	µg/L	0.33	1	M Pattanayek	8/17/2009	
Arsenic	1.6J	µg/L	0.93	5	M Pattanayek	8/17/2009	
Barium	45	µg/L	2.5	5	M Pattanayek	8/17/2009	
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009	
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009	
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009	
Cobalt	0.29J	µg/L	0.04	1	M Pattanayek	8/17/2009	
Copper	2.3	µg/L	0.38	1	M Pattanayek	8/17/2009	
Lead	0.24J	µg/L	0.10	1	M Pattanayek	8/17/2009	
Manganese	41	µg/L	0.42	1	M Pattanayek	8/17/2009	
Nickel	U	µg/L	0.25	1	M Pattanayek	8/17/2009	
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009	
Silver	0.057J	µg/L	0.03	0.25	M Pattanayek	8/17/2009	
Thallium	0.19J	µg/L	0.03	1	M Pattanayek	8/17/2009	
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009	
Zinc	5.2	µg/L	1.9	5	M Pattanayek	8/17/2009	

Lab-Sample Number: K00002739007
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 08/13/2009 11:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.78 pH Units
Chlorine, residual:
Conductivity: 265 uMHO
Temperature: 24.62
Dissolved Oxygen: 8.04 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002739008
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge Point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 08/13/2009 11:35
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.66 pH Units
Chlorine, residual:
Conductivity: 279 uMHO
Temperature: 27.29
Dissolved Oxygen: 7.13 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009	

TEST: ICP		METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	310	µg/L	2.9	10	A Bass	8/18/2009	

TEST: ICP-MS		METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Aluminum	410	µg/L	6.4	10	M Pattanayek	8/17/2009	
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009	
Arsenic	3.8J	µg/L	0.93	5	M Pattanayek	8/17/2009	
Barium	64	µg/L	2.5	5	M Pattanayek	8/17/2009	
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009	
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009	
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009	
Cobalt	0.43J	µg/L	0.04	1	M Pattanayek	8/17/2009	
Copper	7.9	µg/L	0.38	1	M Pattanayek	8/17/2009	
Lead	0.51J	µg/L	0.10	1	M Pattanayek	8/17/2009	
Manganese	67	µg/L	0.42	1	M Pattanayek	8/17/2009	
Nickel	0.47J	µg/L	0.25	1	M Pattanayek	8/17/2009	
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009	
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009	
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	8/17/2009	
Vanadium	4.5J	µg/L	3.4	5	M Pattanayek	8/17/2009	
Zinc	7.9	µg/L	1.9	5	M Pattanayek	8/17/2009	

Lab-Sample Number: K00002739008
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge Point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 08/13/2009 11:35
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.66 pH Units
Chlorine, residual:
Conductivity: 279 uMHO
Temperature: 27.29
Dissolved Oxygen: 7.13 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number:	K00002739009	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.64 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	276 uMHO
Project Site No.:	6	Temperature:	20.43
Station No.:	CLINC004.5RO	Dissolved Oxygen:	7.80 mg/L
Date/Time Collected:	08/13/2009 11:50	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	08/13/2009 13:10		
Received By:	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	08/17/2009				S Ufegbu	8/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	230	µg/L	2.9	10	A Bass	8/18/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	150	µg/L	6.4	10	M Pattanayek	8/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	8/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	8/17/2009
Barium	38	µg/L	2.5	5	M Pattanayek	8/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	8/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	8/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	8/17/2009
Cobalt	0.23J	µg/L	0.04	1	M Pattanayek	8/17/2009
Copper	2.2	µg/L	0.38	1	M Pattanayek	8/17/2009
Lead	0.21J	µg/L	0.10	1	M Pattanayek	8/17/2009
Manganese	0.43J	µg/L	0.42	1	M Pattanayek	8/17/2009
Nickel	U	µg/L	0.25	1	M Pattanayek	8/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	8/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	8/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	8/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	8/17/2009
Zinc	3.8J	µg/L	1.9	5	M Pattanayek	8/17/2009

Lab-Sample Number:	K00002739009	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.64 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	276 uMHO
Project Site No.:	6	Temperature:	20.43
Station No.:	CLINC004.5RO	Dissolved Oxygen:	7.80 mg/L
Date/Time Collected:	08/13/2009 11:50	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	08/13/2009 13:10		
Received By:	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.03J	µg/L	0.029	0.2	A Bass	8/19/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected